

VELUX®

SUNLIGHT AND MEADOWS

Cooperative Housing in Erdeven, France





INNOVATION IN THE COUNTRYSIDE

A group of friends, who used to study together architecture in Bretagne, decided to build a house together: three families, among them Benjamin Jardel and Nicolas Epailard, whos office, j+e architectes, designed the building. The collective found and bought three adjacent plots on the outskirts of the little town of Erdeven, meant for three single-family houses, and came up with a new type of housing.

Four units housing three apartments, shared space and an office area are separated by sun-drenched greenhouses. The inhabitants share a laundry, working space, vegetable garden and parking lot, while the greenhouses, flats and gardens are private.

"I always wanted to live close to the ocean, in the countryside – others have followed my dream, and we made together something completely new. We called the house "Les Pieds Verts," meaning "green feet.""

Benjamin Jardel, architect and co-owner of the house

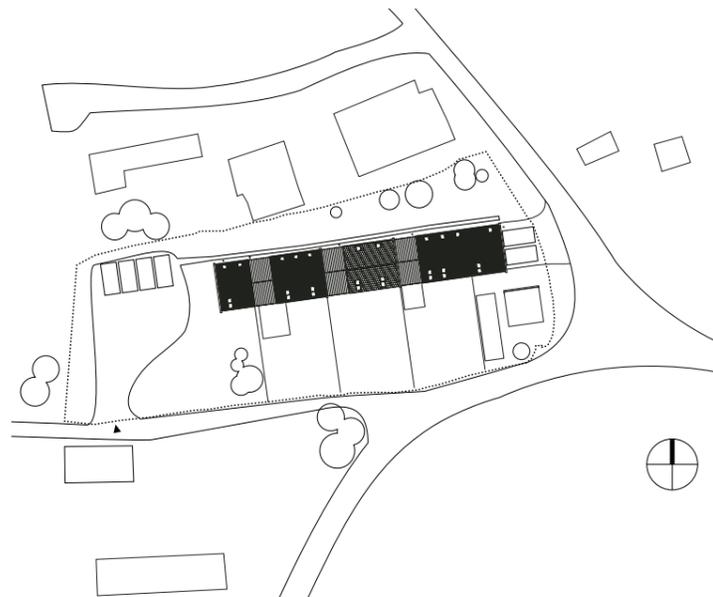
The project was meant to be innovative in all aspects, starting from the first sketches. Environmentally friendly, with low carbon emissions, constructed from local materials only, with the help of future inhabitants. "Les Pieds Verts" is be a statement against countless new-built single-family houses and reactionary repetition of traditional aesthetics.

Building such a house required a lot of effort during the planning phase, as the regulations in landscape protection zones – Erdeven lies in one of them – impose strict rules on volumes and materials of newbuild houses. Luckily i+e architectes could convince the authorities that wood shingles and green roofs will match the landscape as well as white walls and ceramic roof slates typical for the region. Because of limited height of the volume and compulsory roof angle of 45 degrees, making a two-storey house was possible only with roof windows.

"A relative called "Les Pieds Verts" "a house of light and shadows:" We find it a very accurate description and share the opinion, that daylight is the primary material of our house."

Inhabitant of the house

Site plan. The site is on a crossing of two unpaved country roads leading to the few houses standing among the fields. The entrance to the site is on the southwest, a narrow path leads from an unpaved area to the entrances on the northern side of the house. The vegetation is a wild meadow in all shared places, except for the vegetable garden. Each house has its own garden with an individually designed terrace.





"During the design process, we were conscious of the right intensity of daylight in each room. Sun floods the living rooms, while VELUX windows ensure an adequate amount of daylight in the bedrooms. Sunlight brings our architecture to life and is our primary source of heating. We store its energy thanks to high-performance insulation and materials with high inertia, to distribute it in the house using a double-flow ventilation system. Daylight keeps us in constant touch with our environment."

Benjamin Jardel, architect and co-owner of the house





“One of the great things about our house is that it accommodates three completely different apartments in a calm, harmonious volume.”

Inhabitant of the house

A BIOCLIMATIC, FRIENDLY ENVIRONMENT

The apartments combine the advantages of tradition and innovation, each of them offering different spatial experiences. Plain plaster walls and natural flooring materials – wood or linoleum – leave the inhabitants room for expressing their personalities.

All four units – three apartments and the office space – cover two floors, the upper one relying on VELUX windows only. The district architect, who approved the project, saw this solution as the only option allowing a long, straight traditional roof form.

j+e architectes occupied the office space with a separate entrance from the road. Recently, Benjamin Jardel founded his own office, Jardel Architecture, in a nearby village, and enjoys coming back home to “Les Pieds Vertes” even more. The apartments have generous day areas on the ground floor, while bedrooms and bathrooms are tucked under the roof, lit through a row of VELUX windows located on both sides of the roof. What started in 2013 as a project of three couples became a home for ten people – seven children born after the beginning of the construction process. Fenced gardens, greenhouses, common spaces as well as play areas under the roof provide a safe, healthy and inspiring space for the youngest inhabitants.



Above: floorplan of the ground floor, from the left: common area with laundry, apartments, office. The northern walls of the greenhouses are partially massive to prevent heat loss, while the rest, including roof, is clad in polycarbonate. The garden facades are divided in two elements, which – thanks to hinges on both sides – can be folded for ventilation. The middle apartment features a heating wall made out of rammed earth.

Below: first floor. The common area has a generous double-height space, brightly lit from above thanks to VELUX windows on both sides of the roof. Adjoining greenhouse is equipped with a staircase and an so integral part of the apartment, despite of different temperature than inside the rooms. No load-bearing walls on the inside enabled free planning, and so every unit is completely different.



"Sunlight makes all the materials used in the interior come alive."

Inhabitant of the house





"We very much enjoy the spaces inside the house: their shape comes from a traditional volume, yet they are very contemporary."

Inhabitant of the house

A HEALTHY CLIMATE

The house is divided by three greenhouses, storing heat from the solar radiation to return it during the night. A dual ventilation system with heat recovery as well as a thick insulation layer ensures an optimal indoor climate. Recycling or using biodegradable resources is a rule in the entire house: straw and hemp were used for insulation, collected rainwater irrigates the greenhouses, wooden shingles of the facade left untreated.

The house has no traditional heating: instead of it each unit has an indoor gas oven or a heating wall made out of rammed earth.

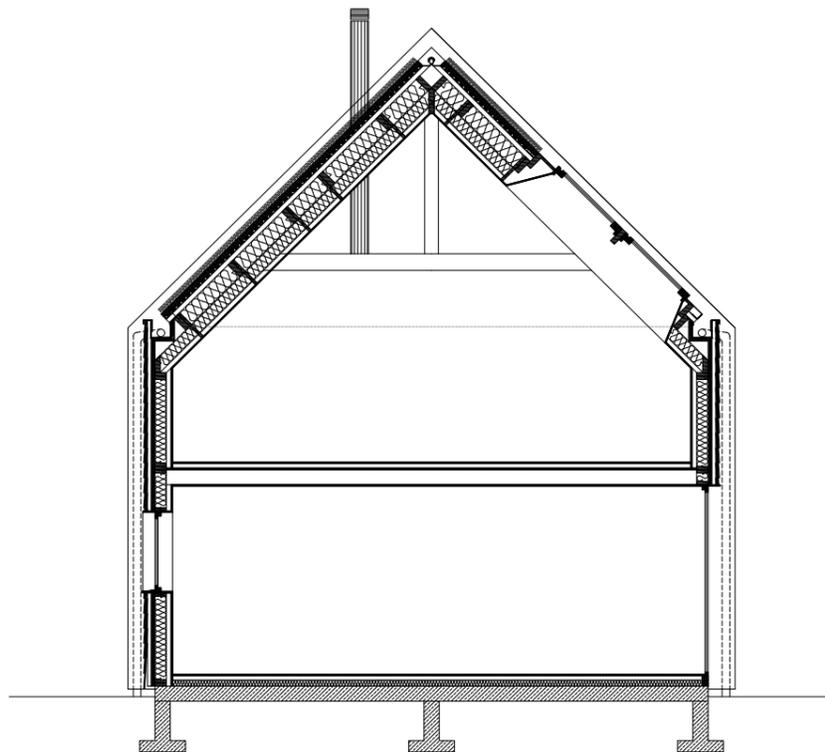
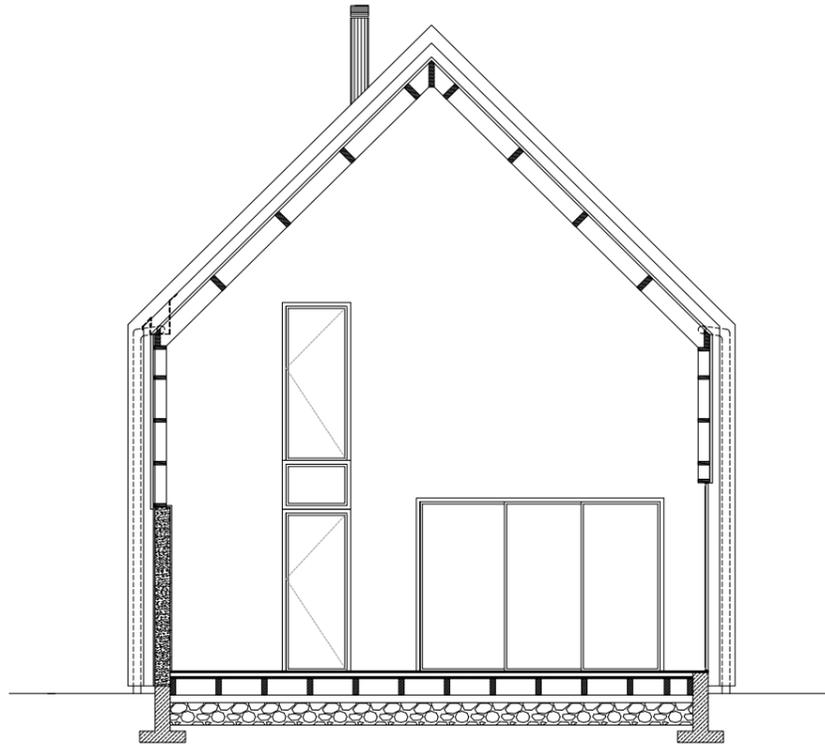
On hot summer days opened polycarbonate greenhouse doors as well as VELUX windows provide natural, effective air circulation.

Above: cross-section through a greenhouse with a door to the garden on the southern facade. The northern facade's lowest part is a massive wall with entrance door.

Below: cross-section through an apartment, showing a double VELUX window. Below, the living area opens to the south, towards a private garden.

Only the foundations had to be cast, all other construction elements are wooden. A dense timber frame of 4.5x15cm elements in 60cm distance supports a natural insulation without plastic foil between the layers. The facade is clad with untreated chestnut wood shingles.

Gutter pipes are hidden in the construction of the eave: a solution necessary for achieving a clear, contemporary geometry.













PROJECT DATA

Year: 2013 – 2018
Location: Erdeven, France
Client: SCA Les Pieds Verts
Architects: Benjamin Jardel & Nicolas Epailard, j+e architectes, Erdeven, France
Photos: Antoine Mercusot (exterior), Fanch Galivel (interior)



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